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INFANT CARE PRACTICE BY MOTHERS IN ZAHEDAN, IRAN

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ABSTRACT

Introduction
Babies are unable to save themselves against risk factors. Proper maternal practices in early days of life can save them from risk factors. This study aimed to evaluate maternal care practice on healthy children and associated factors.
Methods
A cross-sectional study was operated with Sample size on the basis of percent distribution of mothers in different health centers. Researchers made questionnaire was used with a total of 20 questions and developed by researcher team and after factor analysis was consisted. The data were analyzed in SPSS20 considering 0.05 for the level of significant.
Results
colostrums for first feeding of newborns, breastfed for infant feeding, formulae milk for mothers' practice when they have not enough milk, lateral position for baby sleeping position after lactating and six months for onset age to start Complementary foods had the highest percentage of 96.89, 83.39 69.94, 53.10 and 90.35 respectively in compared to other options in each care. In traditional cares in yes and no options the percentages of mothers who answer yes were 87.27, 24.35, 51.59, 64.08, 24.71 and 31.33 in swaddling, using pacifier, dragging surme in eyes, given water in hot weather, referred for routine checkup and in having vaccination card respectively. Conclusion
Some of practices may not have any harmful effects. it is required that traditional health care practices should be investigated more and those which are useful should be preserved, but that harmful ones should replaced by useful ones. This replacement could be effect when is according a systematic planning and long term programs.

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Introduction

A trip is made by a new born from inside the womb to an independent life outside. Until this time the placenta has been running as the organ for respiration, nutrition, excretion and for the making of various hormones that are basic for the protection but after birth needs specific cares [1]. At present, insufficient care in newborn babies cause's problems. Of all deaths which occur in less than 5 years old, 36% are neonate. More or less, four million neonatal deaths occur annually, 98% occur in developing regions [2]. According to the reports by many authors, the World Bank revealed that this figure achieved to eleven per thousand live births when in many European countries, the rate is 2.3 and conversely is high in some countries such as Afghanistan 36, and India 31 [3-5]. Therefore, the most critical stages of life is the neonatal and recognizing the need for accurate and precise care is necessary [6]. World Health Organization (WHO) has recommended that all mothers should have good practice related to infants care. They should continue breastfeeding as long as the mother and child could

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and wish. Suitable and sufficient complementary food should be added six months after birth [7,8]. Cultural values, attitudes, beliefs and behaviors have strong effect on baby's health. These aspects are considered as dynamic factors which play an important role in health and diseases [9]. These factors may vary from society to society, culture to culture and Iran is not excluded from this fact because of very old historical records in caring of children. Zahedan is located in the east and the most dryness region of Iran with very old believes and cultures. Tropical and infectious diseases are serious risk factors for infants and according to the mortality database operated by Child Health Unit (CHU), Deputy of Health (DH), Zahedan University of Medical Sciences (ZaUMS), the Infant Mortality Rate (IMR) was 20.7 in 2013-2014 years in which 68% occurred in the first 28 days. Probably mother's practice has a big role in infants' mortality. Insufficient knowledge in care during infancy in some regions still causes child health problems in Iran and more strong in Sistan and Baluchistan province. Therefore this study was done with the aim of evaluation maternal practice in infants caring.

1- Materials and Methods

The present cross-sectional based population study performed on 555 women in reproductive age group in Zahedan city belongs to the southeast zone of Iran. The study was conducted over a period of two months in October and November of the year 2016. The study area had population about 800,000 had 40 health centers, 32 for urban and 18 for rural area at the time of study. The study population included all women of reproductive age groups residing in all districts of the city selected randomly from primary care units of health centers.

2.1- Sample size

Easy and access able sampling applied to collect ten mothers from each health center. Considering a 10 percent of samples in probable non response gave us 550 mothers. But for more accuracy and trust 555 mothers were asked in filling out the data sheet form along with an easy interview. Only mothers with at least one child aged less than one year were eligible for interview. All information pertaining to maternal practices concerning child health was taken in reference to the youngest child only. The interview took place only after informed consent was given mothers in each health center.

2.2- Data Sheet form

A data sheet form was made by researcher team with a total of 20 questions and developed according to the authors' experience. The baby and maternal background questions were baby's gender, maternal age with age at marriage, maternal job and education, Place of resident, prenatal care, Health giver and Type of delivery and followed by another set of questions about nutritional practice including:

1-first feeding of newborn baby with options of: colostrum, b) sugar water, c) formulae milk and d) others.

2- Infant feeding with options of: a) Breast milk, b) formulae + breast milk, c) formulae milk and d) others.

3- Mother Performance when has not enough milk with options of: a) using formulae milk, b) using cow milk, c) using complementary foods d) using nannies.

4-Baby sleeping position after lactating with options of: a) supine, b) lateral, c) 30 degrees head-up and d) prone.

5- Onset age to start complementary foods with options of: a) 3 months, b) 4 months, c) 6 months and d) first year of age.

And finally the next set of questions were related to the traditional practice such as: swaddling, using pacifier, dragging surme (eyeliner) in eyes, given water in hot weather, referred for routine checkup and having vaccination cards in referring for medication with yes and no options.

According to the ethical meeting of Zahedan University of Medical Sciences the study was approved by the research committee. After explaining mothers the goals of the study those who were agree entered to the study by put their signature at the bottom of the consent letter.

2.3- Statistical methods and techniques

For scoring maternal practice in nutritional aspect we used scores of 3 for the best selection and zero for the worst. The total score was calculated to level the practice by using of $SI = (X-X_{min}) / (X_{max}-X_{min})$ mapping, where: $0 <= SI = <1$. From 0 to 0.33 coded with poor or weak practice, the range of 0.33 to 0.66 and 0.66 to 1 coded moderate and good practice respectively. In terms of traditional cares, scores one for good response and zero for the bad and then leveled by SI map in the same manner. Analyses of data were done by the SPSS software (version 16, SPSS Inc, Chicago, Ill, USA). For descriptive statistics frequency and percentage were used. And for inferential statistics the correlation coefficient, independent T-test and ANOVA in 95% confidence interval were applied.

2- Results

The results of the present study showed that out of 555 mothers 50.1% had boys. The mean age of mothers and age at marriage were 27.1± 5.88 and 17.8 ±4.11 years respectively. Table 1 showed that in cares of nutritional practices, colostrums in first feeding, breastfed in infant feeding, formulae milk and lateral position and the sixth month for onset age to start complementary foods had the highest percentage of 96.89%, 83.39%, 69.94%, 53.10% and 90.35 percent respectively.

After using the SI mapping tin scoring nutritional practice the table 2 showed the practice levels. First infant feeding as a practice was done by 91.39% of mothers in good level, infant feeding by 95.49%, mother practice when they had not enough milk by 72.03%, baby sleeping position by 64.05% and Onset age for complementary foods by 96.10 percent.

A series of infant cares rooted in the culture and beliefs.

Table 3 showed that maternal practices were bad, 87.27% of mothers interested to swaddle their babies. Dragging surme (eyeliner) in eyes showed that 51.59% of mothers did it in their self-favor. Using pacifier somehow was not in favor of (75.65%) mothers. In routine examination and checking up, 75.29% of mothers had good action when 31.33% of them in checking up had vaccination cards.

Table 4 showed the results of independent t-test and one way analysis of variance to compare scores in different options for some factors. Mother's job had significant association with nutritional (f=4.2, p=0.049) and traditional practices (f=4.8, p=0.045). In the case of maternal education, a meaningful association observed with traditional care (f=12.92, p=0.000). Place of resident and type of delivery didn't show any significant association with both care practices. Traditional care practice showed a significant difference in scores according to health givers (f=4.32, p=0.014). Mothers with regular prenatal care had the highest score for both traditional and nutritional cares and showed a significant association (f=5.2, p=0.010 and f=4.35, p=0.011).

3- Discussion

The World Health Organization (WHO) has recommended that all mothers should breastfeed their children exclusively for the first 6 months. Has been estimated that only 35% of children less than 5 months breastfed exclusively around the world [8]. In our sample the majority of our mothers do feed their children with breast. In a study conducted by Peters, breastfeeding at early hours after birth is reported as 57% that is strongly lower than our results[6]. From the present study concluded that the majority of mothers started complementary feeding after the sixth month when khan [10] reported 35 percent.

In respect to the cultures and society's beliefs in many ancient regions, mothers think that colostrum might prevent new babies from illnesses. In our study, about ninety percent of mothers did the first infant feeding with colostrum in which they believed that it is a vaccine for neonates. Meanwhile, Singh and Prathbha were found that 47.8% and 43.5% of mothers used colostrum as the first infants' feeding respectively [11, 12] in which was much lower than the percent of our results.

These traditional practices are still important in the postpartum period in traditional societies. Feeding with colostrum in the early hours after birth and exclusive breastfeeding are important factors in healthcare to survive babies during the neonatal period. In this study the majority of mothers interested to use formulae milk and followed with using of nannies in the case of having not enough milk.

Practices on breastfeeding are mainly controlled by culture through maternal grandmothers and other elder women in society. Most children are feeding by breast 2-3 days after delivery and the colostrum is not fed to children by majority of mothers as it is considered heavy, thick, course, dirty, toxic, and harmful to children's health[13].

Myers concluded that prone sleeping was associated with a 79% increase in quiet sleep and a 71% decrease in time awake [14]. In the present study, the majority of mothers used lateral position. The level of these practices varying with the knowledge and awareness of mothers. Rao found that the majority of mothers utilized the supine sleep position for infants at least 1-2 weeks prior to discharge, but after discharge, only 38% of the mothers actively discouraged prone sleeping and 17% additionally recommended side sleeping [15]. Generally, complementary foods are not introduced to infants before four months, with the average age about seven months. We concluded that the majority of mothers started complementary foods after the sixth month. But Vaahtera [16] reported that complementary foods and family foods were introduced at median ages of 2.5 and 6 months in which was much earlier than recommended.

In our study 64.08 % of mothers gave their children water in hot weather. Almroth concluded that because the values for specific gravity were universally low it was concluded that exclusively breastfed for infants living in a hot humid climate will be managed without additional water [17]. Additional water may be desirable during illness. When Sachdev resulted, exclusively breastfed infants do not need supplemental water [18].

Mother's job and prenatal care showed a positive impact on nutritional cares. Mothers in the study either wrapped the whole body of their children or only the waist and legs. According to the costumes beliefs, mothers believed that swaddling baby provides them comfort and warmth, alignment of their extremities and joints and allowed them to hold their babies easily and some preferred swaddling just because their parents did so. Ayse [19] reported that 25 % of mothers did swaddle their babies when our result showed that this was 87.27 percent.

Pacifiers are related to a shorter duration of breastfeeding. Victora [20] showed that using of pacifier was common in 85% of mothers at the first month. Children who stopped breastfeeding in a given period were likely to take up the pacifier during this period. Our results showed that 24.35% of mothers were used pacifier and this sign was good for our society. Nelson [21] reported that the rates of pacifier use varied between centers of the study and was negatively associated with breastfeeding and our study showed our mothers were satisfied with this recommendation.

Use of kohl (surma) as eyeliner is a popular practice in some part of the world like Saudi Arabia. Blood analyses of regular kohl users revealed a high lead concentration and relatively low haemoglobin levels in which may cause lead poisoning [22]. Due to the health risk, an official public awareness campaign was suggested to encourage the use of lead-free surma [22, 23]. In our study 51.59 % of mothers use surma without being aware of lead concentration. Better to warn them before discharging or early days after delivery to use surma with low lead concentration.

Although all the mothers in the present study were of the opinion that vaccines are essential but the majority of them did not know all diseases can be prevented with vaccines. They refer to visit doctor just for common morbidity. Various studies have proved that better knowledge and practice about the vaccines would improve the vaccine coverage [24-26]. Vaccination in Zahedan city is an obligatory programme. Despite all effort taken by the health deputy (DH) of Zahedan University of Medical Science (ZaUMS) in which is responsible for the programme, still remain some elements of incomplete immunization of the children. One of the causes for this under coverage may be due to mother practice in related topics at study. In the present study we resulted that the majority of mothers showed good practice for routine check up and having vaccination card of 75.29% and 68.67% respectively. These results comparatively were similar with the percentages of children who were immunized in Karachi in Pakistan [27].

The results of present study offered deep insight into the health care practice with regards to nutritional and traditional aspects. It is widely accepted that child care practice programs have played a huge part in the prevention of many diseases, disability and mortality. In the study of associated factors was demonstrated that only maternal job and having prenatal care were associated with both care practices. Maternal education and health givers showed huge impact on traditional practices. The analysis of the impacted factors concluded that the majority of them had more effect on traditional care practices.

The education, place of residency and maternal job do affect the pattern of immunization [26]. In many studies like Mohamed Asif, age of mother, education and job had significant affect on practice of neonatal care [25].

4- Conclusion

Culture and religious beliefs have positive influences on the performance of maternity care. Improvement in child care practices could positively impact nutritional status of children. The present study indicated that traditional practices pertaining to maternal and infant health are still popular. The postpartum period is counted as a period when mothers and their babies are more vulnerable to illnesses. Some of these practices may not harmful on health, while others do so. Therefore, it is required that traditional health care practices should be investigated more and those are useful should be preserved, but that harmful ones should replaced by useful ones.

5- Aknowledgement:

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6- Conflict Of Interest

The authors declare that they have no competing interests.

Authors' contributions

The authors declare that they have same role in the article preparation and could be mentioned as follow:

Tahereh Boryri: Writing proposal, proposal defense, data collection and doing jobs related to discussion part of the study.

Noor Mohammad Noori: supervising the manuscript

Alireza Teimouri: Data analysis, writing the manuscript, sending for publish to the journal.

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